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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,222	10/16/2000	ANDREW PETER BRADLEY	169.1865	1392

5514 7590 07/15/2004

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NEW YORK, NY 10112

EXAMINER
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MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 07/15/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/688,222

Applicant(s)

BRADLEY ET AL.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-6,29-34 and 40-45 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-26,35-37 and 46-62 is/are allowed.
- 6) ☒ Claim(s) 27,28,38 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5 & 7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicants' election without traverse of Group II (corresponding to claims 7-28, 35-39, and 46-62) in the reply filed on April 19, 2004 is acknowledged.
2. Claims 1-6, 29-34, and 40-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 19, 2004.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 27-28 and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Tai (5,054,100).

With regard to claim 27, Tai discloses a method of performing interpolation on a pixel-based image (See for example, Figure 1), said method comprising the steps of accessing, i.e., accesses using a scanner) a first set of discrete sample values of said image data (See for example, items 20 and 22, in Fig. 6); calculating kernel values, i.e., weighting factors, for each of said discrete sample values using a kernel (the use of a kernel is considered inherent because the weighting factors represent the components of an interpolation kernel. Additionally, applicants' attention is invited to col. 7, lines 15-25), wherein parameters of said kernel are selected depending upon an edge orientation indicator, an edge strength indicator, and an edge

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context indicator for each of said discrete sample values (See Fig. 6; and col. 7, lines 26-51); and convolving said kernel values with said discrete sample values to provide a second set of discrete sample values, i.e., new pixel data (See item 32, in Fig. 6; and col. 7, lines 39-51).

With regard to claim 28, a method of interpolating a first set of discrete sample values (See item 22, in Fig. 6) to generate a second set of discrete sample values using an interpolation (See items 24 and 32, in Fig. 6) kernel (the use of a kernel is considered inherent because the weighting factors represent the components of an interpolation kernel. Additionally, applicants' attention is invited to col. 7, lines 15-25), wherein parameters of said interpolation kernel are selected depending on an edge strength indicator, an edge direction indicator and an edge context indicator for each discrete sample value of said first set (See col. 7, lines 26-51).

Claims 38 and 39 are rejected the same as claims 27 and 28 respectively. Thus, arguments analogous to those presented above for claims 27 and 28 are respectively applicable to claims 38 and 39.

***Allowable Subject Matter***

5. Claims 7-26, 35-37, and 46-62 are allowed.
6. The following is an examiner's statement of reasons for allowance: none of the prior art of record teach or fairly suggest, among other things, manipulating the edge sample values and the stored angle of orientation for each of said discrete sample values using a morphological process; combining said manipulated edge sample values and said manipulated angle of

orientation for each of said discrete sample values to form a second mapping of the discrete sample values; mapping said manipulated edge sample values of said second mapping, using a mapping function, to form a third mapping; for each discrete sample value of said third mapping: calculating parameters of a kernel, wherein said parameters are dependant upon the edge sample values and said angle of orientation of each of said sample values of said third mapping; and calculating a plurality of kernel values utilizing said parameters and the kernel. It is for these reasons and in combination with all of the other elements of the claims that claims 7-26, 35-37, and 46-62 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 5008752, 5774601, 5953465, 6404918, and 6424749; a publication to: Reichenbach, et al. "Optimal, small kernels for edge detection"; Freeman, et al. "The design and use of steerable filters"; and Farid, et al. "Optimally rotation-equivariant directional derivative kernels\*"; and Nishikata, et al. "Filter Circuit: a computer translation of Japanese patent number 06-260889".

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**DANIEL MARIAM**  
**PRIMARY EXAMINER**

July 2, 2004